

Amendments to the Claims

1. **(Currently Amended)** An information recording medium for storing at least one object containing multiplexed encoded video data and encoded audio data, and management information for managing the at least one or more objects object, wherein:

the image video data includes intra-coded picture data and inter-coded picture data;

the management information includes map information for the at least one object, the map information managing the objects at least one object in blocks of a fixed length and correlating the presentation time of the video data multiplexed to the objects at least one object to the blocks, blocks; and

the map information indicating indicates which of the blocks constituting of the at least one object includes the leading data of the intra-coded picture data; and

the map information has flag information allocated to each block to indicate which block includes the leading data of the intra-coded picture data of the at least one object.

2. **(Currently Amended)** The information recording medium according to claim 1, wherein the at least one object has a packet structure, and

the block is a unit for grouping and managing data larger than at least one object packet.

3. **(Original)** The information recording medium according to claim 2, wherein the recording medium is a disc shaped recording medium, and the fixed length block is a unit of at least one ECC block.

Claims 4 and 5 **(Canceled)**

6. **(Currently Amended)** The information recording medium according to claim 1, wherein there are

at least two objects including a first object and a second object are stored on the information recording medium,

the first object being an is the at least one object for which a the location of the intra-coded picture data in the object is managed by the management information, and

the second object ~~being~~ is an object for which ~~the~~ a location of intra-coded picture data in the object is not managed by the management information; and information
the object correlated by the map information is the first object.

Claims 7 and 8 (**Canceled**)

9. **(Original)** The information recording medium according to claim 1, wherein the at least one object is an MPEG transport stream, and the intra-coded picture data is an I-picture.

Claims 10-17 (**Canceled**)

18. **(Currently Amended)** An information recording apparatus for recording information to an information recording medium for storing at least two objects containing multiplexed encoded video data and encoded audio data, and management information for managing the at least two objects,

the video data including intra-coded picture data and inter-coded picture data,

the at least two objects including at least a first object and a second object,

the first object being an object for which a location of the intra-coded picture data in the object is managed by the management information,

the second object being an object for which a location of the intra-coded picture data in the object is not managed by the management information,

the management information being information for separately managing the first object and the second object, and including map information for each first object, and

the map information correlating a playback time of the corresponding first object with the location of the intra-coded picture data included in the corresponding first object,

the apparatus comprising:

an interface for inputting an object from an external part;

a generating section for generating management information corresponding to the input object; and

a recording section for recording the input object and the management information to the information recording medium,

wherein the generating section includes
a detection section for determining if a block contained in the input object includes intra-coded picture data, and
a producing section for producing the management information containing map information based on a result from the detection section. The apparatus according to claim 17,

wherein the management information has, as information to identify the first object and second object, a validity flag which indicates whether the map information for each first object and second object is valid, and

wherein the generating section is further for determining whether the input object is a first object or a second object,

generating the management information containing including the map information for the first object, and setting the validity flag in the management information to a valid state, when the input object is determined to be a first object, and

generating the management information for the second object, and setting the validity flag in the management information to an invalid state, when the input object is determined to be a second object.

Claim 19 (Canceled)

20. (Currently Amended) A method of recording information to an information recording medium for storing at least two objects containing multiplexed encoded video data and encoded audio data, and management information for managing the at least two objects,

the video data including intra-coded picture data and inter-coded picture data,

the at least two objects including at least a first object and a second object,

the first object being an object for which a location of the intra-coded picture data in the object is managed by the management information,

the second object being an object for which a location of intra-coded picture data in the object is not managed by the management information,

the management information being information for separately managing the first object and the second object, and including map information for each first object, and

the map information correlating a playback time of the corresponding first object with the location of the intra-coded picture data included in the corresponding first object,

the recording method comprising:

inputting the object from an external part;

generating management information for the input object; and

recording the input object and the management information to the information recording medium,

wherein the generating includes

detecting whether the input object is a first object or a second object, and if the input object is a first object, determining if a block contained in the input object includes the intra-coded picture data, and

producing the management information containing the map information based on a result of the determining, ~~The method according to claim 19,~~

wherein the management information has, as information to identify the first object and the second object, a validity flag which indicates whether the map information for each first object and second object is valid; valid, and

wherein the generating further includes

determining whether the input object is a first object or a second object, and

when the input object is determined to be a first object, generating the management information including the map information for the first object, and setting the validity flag of the management information to a valid state, or and

when the input object is determined to be a second object, generating the management information for the second object, and setting the validity flag in the management information to an invalid state.

Claims 21 and 22 (Cancelled)

23. (New) An information recording medium for storing at least one object containing multiplexed encoded video data and encoded audio data, and management information for managing the at least one object, wherein:

the video data includes intra-coded picture data and inter-coded picture data;

the management information includes map information for the at least one object, the map information managing the at least one object in blocks of a fixed length and correlating presentation time of the video data multiplexed to the at least one object to the blocks;

the map information indicates which of the blocks of the at least one object includes leading data of the intra-coded picture data; and

the map information has flag information allocated to each block to indicate which block includes last data of the intra-coded picture data of the at least one object.

24. (New) The information recording medium according to claim 23, wherein the at least one object has a packet structure, and

the block is a unit for grouping and managing data larger than at least one object packet.

25. (New) The information recording medium according to claim 24, wherein the recording medium is a disc shaped recording medium, and the fixed length block is a unit of at least one ECC block.

26. (New) The information recording medium according to claim 23, wherein at least two objects including a first object and a second object are stored on the information recording medium,

the first object is the at least one object for which a location of the intra-coded picture data in the object is managed by the management information, and

the second object is an object for which a location of intra-coded picture data in the object is not managed by the management information.

27. (New) The information recording medium according to claim 23, wherein the at least one object is an MPEG transport stream, and the intra-coded picture data is an I-picture.